Correspondence

The Editorial Board will be pleased to receive and consider for publication correspondence containing information of interest to physicians or commenting on issues of the day. Letters ordinarily should not exceed 600 words, and must be typewritten, double-spaced and submitted in duplicate (the original typescript and one copy). Authors will be given an opportunity to review any substantial editing or abridgment before publication.

Peripheral Atheroembolus Following External Cardiac Massage

TO THE EDITOR: The potential complications of external cardiac massage during cardiopulmonary resuscitation are many. Well described in textbooks,[1] these include such complications as rib fracture, pneumothorax and fat embolism. We wish to report a case of embolic occlusion of the popliteal and distal arteries following external cardiac massage.

The vast majority of spontaneously occurring arterial emboli arise from the heart and are thrombotic in nature (that is, mural thrombus).[2] Emboli from atherosclerotic aortic plaques were first predicted by Flory in 1945[3] and later shown to exist by Hoye and co-workers in 1959.[4] This phenomenon is now well described as occurring spontaneously.[2,5,6] In our review of the literature (MEDLINE search), we found no instances of atheroemboli in connection with external cardiac massage.

Figure 1.—Section of embolus showing fibrin, aggregated blood elements and cholesterol clefts. (Hematoxylin and eosin stain, reduced from 40×.)

Report of a Case

A 70-year-old man arrived at the hospital following prolonged cardiopulmonary resuscitation (CPR) with external cardiac massage and electric defibrillation. He had collapsed while working and received immediate external massage, lasting 15 minutes. Eight defibrillation attempts with 320 watt seconds were required before sinus rhythm was restored. On arrival at the hospital, the patient was conscious and complained of pain and coldness in both feet. Physical examination showed a pulse of 90, regular, and a blood pressure of 130/80 mm of mercury. Lower extremity findings were consistent with bilateral popliteal-tibial arterial occlusions.

After heparin was administered, thromboembolectomy of both popliteal-tibial systems via a popliteal approach was carried out. Approximately eight hours elapsed between cardiac resuscitation and embolectomy. Histologic examination of the embolic material showed the presence of atherosclerotic cholesterol emboli (Figure 1).

The patient made a good recovery. Postoperatively, transient renal failure developed secondary to myoglobinuria from skeletal muscle necrosis. Results of serial electrocardiograms and cardiac enzyme determinations were compatible with acute myocardial infarction at the time of admission. At the time of the patient's discharge, however, cardiac and renal function were good,

and there was no evidence of peripheral arterial insufficiency.

Discussion

Embolization in this patient occurred immediately after (or during) CPR with electric defibrillation and external cardiac massage. The presence of cholesterol in embolic material excludes the heart as a possible source of origin[2] and implies that the arterial circulation is the source. In this case, with involvement of both lower extremities, and no apparent involvement of cerebral or upper extremity vessels, the source was presumed to be the proximal arterial tree, and most likely the descending thoracic aorta.

The only reported case of atheroembolus following CPR involved the anterior descending branch of the left coronary artery.[1(p427)] In that case, direct injury to the artery with subsequent embolization of the atherosclerotic plaque resulted from external cardiac massage. We report this case to show that atheroembolic occlusion of peripheral arteries can occur as a result of blood vessel trauma during external cardiac massage.

JAMES C. SHAW, MD
Department of Medicine
ROGER W. HALLIN, MD
Department of Cardiovascular Surgery
Good Samaritan Hospital and Medical Center
Portland, Oregon

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Modern Medicine and Hospital Chaplains

TO THE EDITOR: A definition of health is not just the lack of disease but it is the optimum functioning of body, mind and spirit. In spite of this, not enough attention is given to the spiritual aspects of health in modern medical care. Doctors are trained more in the physical and psychological aspects of health and not at all in the spiritual. Furthermore, the mechanization of medical care has encouraged medicine to focus on physical health. Hospitals which were originally organized by religious groups are now more of a facility for the machines necessary for medical care; and, instead of religious organizations, hospitals are now publicly or privately owned. This leaves the spiritual influence out of medical care.

Yet, there is an increasing need for spiritual health care. The growth of emergency room medicine has its own need for spiritual help during crises. The whole concept of life support systems and the prolonging of life has complicated physical medicine and requires spiritual consultation. Dying, itself, is no longer considered a terminal event but a part of life. Therefore, much needs to be done spiritually for patients during the process of dying and for relatives after death has occurred. The increased use of organ transplants not to mention genetic engineering all require spiritual consideration before being utilized. Even the complicated concept of medical-legal medicine would be influenced in a positive way by involving the spiritual aspect of health care. Perhaps abortion would not be allowed today if modern medicine gave spiritual health care its due. Why is it we do not have hospital chaplains to help with these needs?

Probably the biggest reason we do not utilize hospital chaplains is that doctors have great control of hospitals and doctors do not understand how properly-trained hospital chaplains can help. A chaplain trained in clinical pastoral education can help the doctor treat his patient without complicating the medical care and without any increase in cost. A full-time hospital chaplain is a member of the hospital staff. He has been trained at a clinical pastoral education center (CPE) and he knows more than most chaplains about medical problems. His main job is to enable and to facilitate the job of clergy in the community who come to see their own parishioners. He notifies local clergy when their patients are in the hospital and he helps them to understand the medical problems involved. The hospital chaplain's other duties are to counsel and educate the hospital staff so they can better understand the psychological and spiritual feelings of their patients. The hospital chaplain also participates on tumor boards and medical ethics committees. Periodically, he conducts seminars on medical and spiritual topics for the hospital staff. Finally, people need spiritual help whether they are well, sick or dying. The hospital chaplain is available to provide these spiritual resources whenever they are needed. The reason hospice centers are be-